

WWT/JNCC/SNH Goose & Swan Monitoring Programme

survey results 2005/06

East Canadian High Arctic Light-bellied Brent Goose *Branta bernicla hrota*

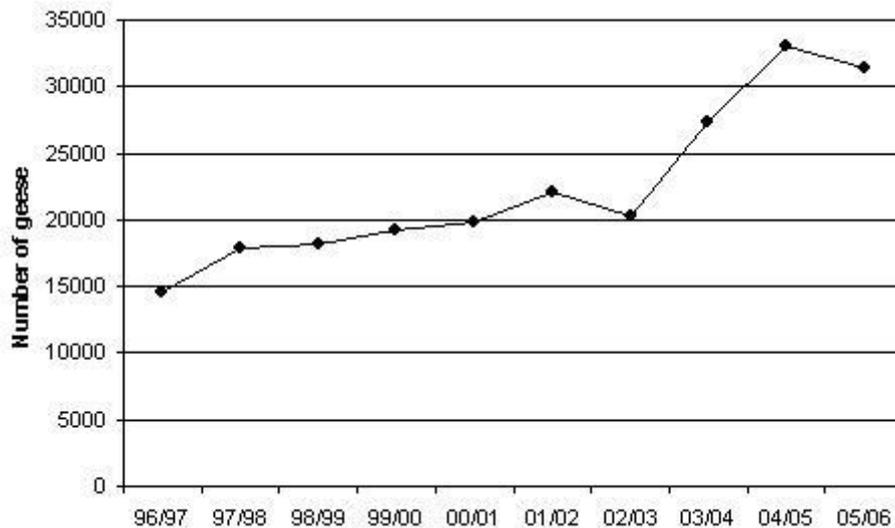
1. Abundance

Autumn 2005 saw comprehensive coverage of all major sites holding East Canadian Light-bellied Brent Geese, with aerial coverage of autumn staging areas in western Iceland synchronous with coverage of all main sites in Ireland. The key census date was 15/16 October and all sites were covered within the period 13-17 October. Of the 31 sites covered, 22 supported geese, including peaks of 21,885 (Strangford Lough), 3,641 (Lough Foyle), 2,023 (Tralee Bay and Castlemaine Harbour) and 836 (Dublin Bay). Aerial coverage of West Iceland, carried out by the Icelandic Institute of Natural History, located 1,496 birds. With only one significant site for which data are currently outstanding (and predicted to comprise only 100-200 birds), the population size is likely to be 31,500-32,000. A higher count of almost 23,500 birds was recorded at Strangford Lough on 20 October. Data were also provided from Islay, where up to 1,000 were recorded on migration in late September and mid-October. These counts are not included in the totals as these birds are likely to have been counted at Irish sites on the core survey dates.

Numbers and percentage of young of East Canadian High Arctic Light-bellied Geese recorded during the 2005/06 International Light-bellied Brent Goose Census in October 2005. Counts in square brackets are estimates based on counts from these sites in previous/subsequent years and are not used in the calculation of the overall total.

Site	Date	Count	% young (n)
West Iceland	13 Oct	1,496	-
Lough Foyle	14 Oct	3,641	12.8 (1,849)
Larne Lough	-	-	-
Belfast Lough	15 Oct	6	-
Strangford Lough	13 Oct	21,885	11.1 (16,390)
Dundrum Bay	13 Oct	173	47.4
Killough Harbour	13 Oct	0	-
Outer Ards	-	-	-
Carlingford Lough	15 Oct	273	65.5 (145)
Dundalk Bay	16 Oct	149	43.8 (32)
Louth/Meath coast	16-17 Oct	141	56.7 (127)
Dublin Bay	16 Oct	836	-
Rogerstown Estuary	15 Oct	222	71.8
Baldoyle Bay	15 Oct	42	47.8 (23)
Broadmeadow (Malahide) Estuary	16 Oct	3	100 (3)
N Wicklow Marshes	-	-	-
Dungarvan Harbour	14 Oct	167	-
Tramore Backstrand	16 Oct	278	-
Co. Cork	14-16 Oct	4	-
Castlemaine Harbour	16 Oct	778	25.0 (100)
Tralee Bay	16 Oct	1,245	23.9 (443)
Shannon & Fergus Estuary	17 Oct	0	-
Inner Galway Bay	14 Oct	0	-
Blacksod Bay	16 Oct	7	28.6 (7)
Killala Bay	14 Oct	63	-

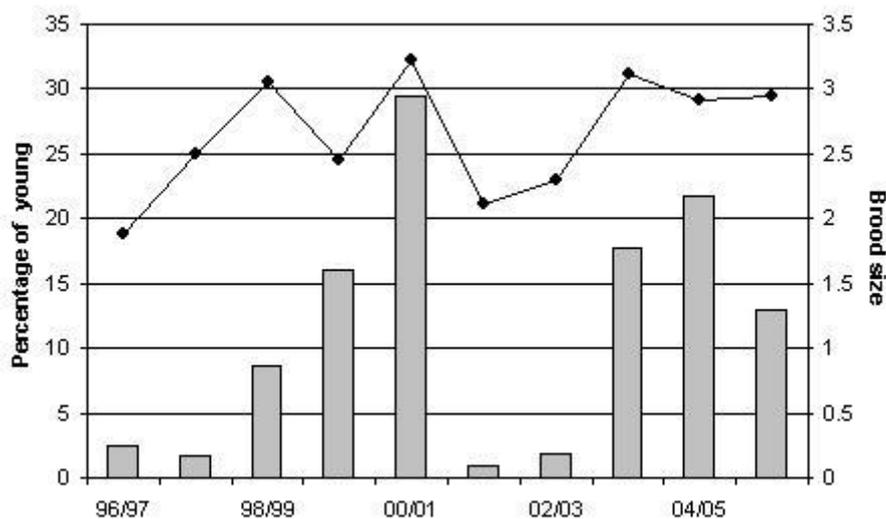
Sligo Bays	-	[200]	-
Co. Donegal	15-16 Oct	33	100 (2)
Total		31,442	12.9 (21,526)



Population estimates of East Canadian High Arctic Light-bellied Brent Goose, 1996/97 to 2005/06. Note: pre-2002/03 counts did not include counts in Iceland and therefore may have underestimated the total population size.

2. Breeding success

A total of 21,526 birds were aged at 13 sites in the mid-October survey, the majority of which were at Strangford Lough and Lough Foyle. This yielded a percentage of 12.9%, with brood sizes comprising two or three goslings being the most frequent (45% and 41%, respectively), and averaging at 2.95 goslings per successful pair (n=190). Age profiles taken in late October and mid-January on a much smaller sample of birds gave proportions of young of 37.7% (n=676; late October) and 16.5% (n=1,989; mid-January).



The mean percentage of young (bars) and mean brood size (dots) of East Canadian High Arctic Light-bellied Brent Geese, 1996/97 to 2005/06.

3. Discussion

Results from the 2005 International Census of East Canadian High Arctic Light-bellied Brent Goose indicated a decline of 5.1% in the population since 2004, following a period of growth between 2002/03 and 2004/05. The percentage of young, assessed during the autumn census, was relatively low following a successful breeding season in 2004 (21.8% young) and was below the five year mean of 14.4% (2000/01-2004/05).

Methodological improvements over time have gradually improved the quality of population estimates of East Canadian Light-bellied Brent Geese, particularly since 2002 when co-ordinated international counts at all major sites in both Ireland and Iceland first began, and are now believed to more accurately reflect the overall population size. However, the rapid movements of birds south from Iceland (and including birds on passage in the Western Isles) or between sites in Ireland makes improving count accuracy difficult. Aerial photography, in addition to international censuses at other times of the year, are two approaches being used to further verify overestimation of population size. Additional aerial surveys in Iceland at spring staging areas in May 2005 and 2006 (Gudmundsson & Colhoun unpubl.) yielded totals of around 22,000 and 30,000, respectively.

This report should be cited as:

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Goose & Swan Monitoring